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IDENTIFICATION MARKING OF EXPERIMENTAL ANIMALS

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ABSTRACT: A method of using plasticized nylon ribbon and numbered ear buttons is described for both individual and group identification of experimental grazing animals.

Marking experimental grazing animals for both individual and group identification has presented many difficulties. Hot-iron branding was perhaps the first method attempted. It required close confinement of the animals for identification and yearly maintenance, such as clipping hair to improve number legibility. The greatest disadvantage of branding, however, was its single use--individual identification only. Group identification of animals number-branded had to be traced to a paper record--not an easy thing to manipulate on horseback or in bad weather.

Such other methods as neck chains, metal ear tags, plastic ear tags, and lip or ear tatoos all have disturbing disadvantages. None serves the dual purpose of individual and group identification.

Notched Plastic Ribbons

A new method is the use of notched plasticized nylon ear ribbons. It has all of the advantages and none of the disadvantages of other methods, and also serves the desired purpose. This method resulted from the combination of techniques used on wild game animals, swine, and laboratory animals. Craighead[1/] marked wild geese, mountain sheep, and elk with

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1/ Craighead, Frank and John. Knocking out grizzlies for their own good. Natl. Geographic 118 (2):277. 1960.

plastic ribbons in Montana and reported satisfactory service from them. More recently they have marked grizzly bears with such ribbons. Animal husbandry men and zoologists have successfully used ear notching systems to number study animals.

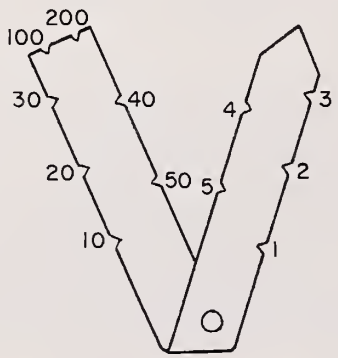
In our first effort, vinyl plastic was used but proved unsatisfactory. Exposed to weather, it became brittle and discolored. Worst of all, livestock found the plastic palatable. Such ribbons disappeared very quickly from the ears of experimental cattle. A new material, plasticized nylon, has given good service to date in both laboratory tests and operational use.

Group Marking

Groups of experimental animals are easily and accurately identified simply by ribbon color. Plasticized nylon strips are available in six colors. Additional group designations can be made by combinations of colors.

Individual Marking

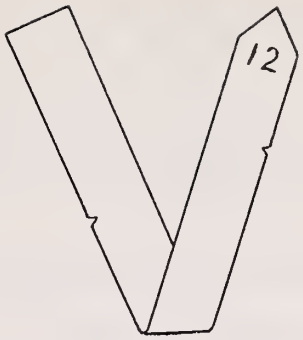
Numbering individual animals within a group is done by notching the free ends of the ribbon according to a code. Attached to the animal's ear by an ear button, the ends are free (fig. 1). The pointed end extends above and slightly to the right (viewed from the top) of the square end. Coded numbers are placed on the ribbon edges, from outside to inside in each case (see drawing).



Numbers are additive, not cumulative. For example, a 5 and a 1 notch in the upper ribbon stands for 6, not 15 or 51. Number 15 requires a 10 notch in the lower ribbon and a 5 notch in the top. Number 51 requires a 50 notch and a 1 notch. The code illustrated provides for 399 numbers.

Numbering the Ribbons

Ribbons, 3/4 inch by 8 inches in size, should be numbered as desired before being attached to the animals. The number, handwritten in ink on the upper surface of the pointed end, will insure correct notching and proper installation.



These written numbers have no further use and, of course, will wash or wear off. A "handy ear notcher," made by Burdizzo[2/] and sold at $2.95 by the California Stockman's Supply Company, is suitable for notching the ribbon. The round hole at the fold of the ribbon can be made with an ordinary office paper punch.

Figure 1.--Ribbon correctly attached to front or top of ear with a button.

Affixing the Ribbons

Confine the animal in a chute or squeeze. Punch a hole in its ear, front or top. In cattle, the hole should appear behind the ear muscle and midway of the ear (head to tip of ear). The California Stockman's Supply Company sells a round ear punch for cattle at $5. A smaller size is available for sheep.

2/ Mention of commercial firms in this report merely indicates known sources of specific items and in no way constitutes an endorsement of products by the Forest Service.

Insert the ear button through the punched hole from inside the ear. Place the folded ribbon, pointed end on top, over the post of the ear button and on the top or outside of the ear. Put the numbered cap of the ear button in place on top of the post, and secure by pressure with the applicator. Each ear button has a number stamped on its outside upper surface. Notching the ribbon to carry the same number provides a check on individual animal identification.

Hints on Number Reading

1. View the ribbon ends from above.
2. Read the bottom ribbon end (square end) first, if both ends are notched. When only the top ribbon end (pointed end) is notched, the number is less than 10. When only the bottom end is notched, the number is 10 or higher and must end in zero.
3. Minimize the number of notches. For number 9, as an example, use the 4 and 5 notches, not 2, 3, and 4, or 1, 3, 5. Similarly, for 60 use the 10 and 50 notches, and for 80, the 30 and 50 notches rather than other combinations.
4. Add the numerical values of the notches for the intended identification number.

Acquiring Materials

Plasticized nylon strips or flagging are available from the Safety Flag Company of America, P. O. Box 1005, Pawtucket, Rhode Island. Each strip, 3 inches by 36 inches, will provide 12 to 16 ear ribbons at a cost of 4-1/2 to 6 cents each. Available colors are white, red, green, yellow, orange, and blue.

Nasco, Inc., Box 1409, Santa Barbara, California, can provide ear buttons at about 4 cents each, in lots of 500. The unit cost, of course, declines as order size increases. This company also manufactures a small hand tool which punches the animal's ear and, in a separate operation, seals the button. This tool, catalogue number X5C-30, retails for $3.25.

Accordingly, necessary hand tools cost $6.20 ($2.95 for the ribbon notcher and $3.25 for the combination ear punch and button sealer.) Cost of material per animal is under 10 cents--the cheapest method known of marking experimental animals for both individual and group identification.